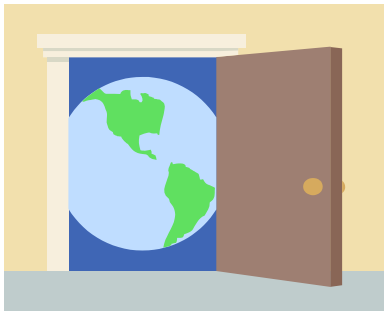




Emerging Challenges and Opportunities for the RIR System



Some History

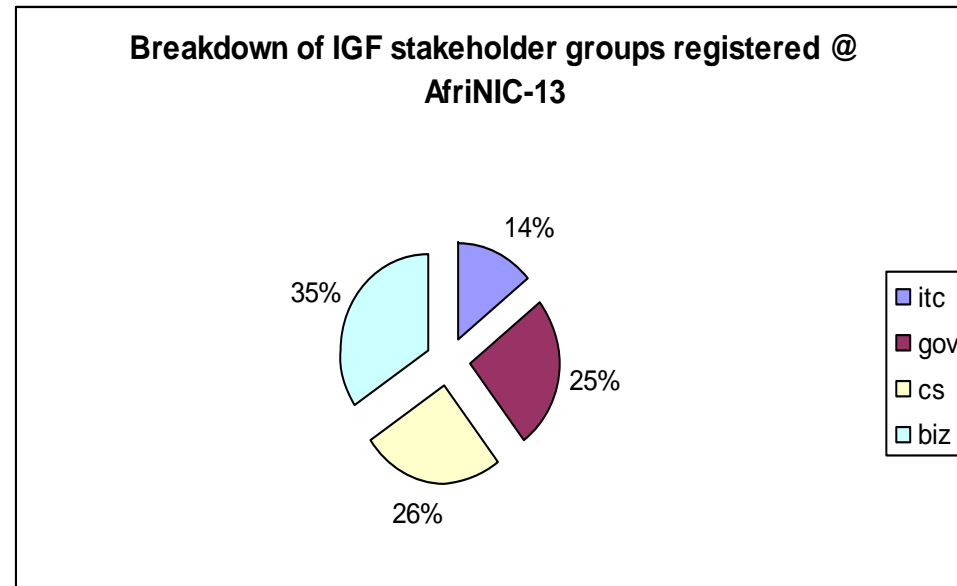
- “We do not believe in kings, presidents and voting. We believe in rough consensus, factual approach and running code.”
Dave Clarke “A Cloudy Crystal Ball – Visions of the Future”
- “Governments of the Industrial World, ... You are not welcome among us. You have no sovereignty where we gather.”
John Perry Barlow – “A Declaration of the Independence of Cyberspace”
- Two decades of largely academic pioneers and a “hands-off” style by governments....eventual commercialisation of Internet and “DNS War”

Current Era of “Enhanced Cooperation” very different from that of early 90’s

- Some Governments very involved in IG issues
- Present discussions are whether EC should be a centralized or a decentralized process
- Some deny it exists, some see it everywhere
- IGFs are another example of EC
- Deniers hope that EC is the vehicle that will internationalize the root...USG still “bogeyman”
- NRO/ISOC have done significant work in this areare-branded it as “continuing cooperation” (several years of outreach in place pre-WSIS)

Enhanced Cooperation ISOC and ICC/BASIS

- **“all stakeholders should take advantage of the opportunity to become more involved in the Internet technical organizations**, where technical standards are developed and where public policy issues at the intersection of technology and policy are discussed
- governments and international institutions to make their Internet policy related and decision making activities more open and inclusive of all stakeholders



v4 exhaustion – Major Challenge

- lead to trading and pricing of v4 addresses and possibly speculation/concentration of resources??
- Sub-optimal outcomes – claim of some developing countries that IP addresses are non distributed fairly (an issue that drove WSIS)
- In Africa, we will have v4 addresses long after the other RIRs “run out”

Globally Coordinated Transfer Policy (latest)*

- **Policy statement:** Any RIR's member may transfer IPv4 addresses to the member of another RIR as long as the two RIRs agree and exercise Internet stewardship and the values expressed in RFC2050.
- **Rationale:** Since individual RIRs now allow transfers, it makes sense to be able to transfer between regions as well.
- **Timetable for implementation:** upon ratification of all five RIRs
- **Timetable for de-implementation:** upon change to this policy text in any RIR
- *Won't apply to AfriNIC region even if we pass it due to SL Policy (if that passes)

Post allocation services - a direct challenge

- “The five RIRs do not compete with each other.
- They have divided up the planet based upon arbitrary geographic lines.
- They do not need to react to market needs.
- They do not have a reason to invest in development of advanced self-service tools.
- Therefore is it time to introduce competition for post-allocations services for number resources?”

http://www.circleid.com/posts/competition_to_regional_internet_registries_rir_for_post_allocation_service/

Non-competition is a feature, not a bug

- Problem to be solved?? IMHO it's how to make money from IP address services
- Fees are charged for services and not for the numbers. If services split from allocation, then fees would have to be charged for numbers....many implications!
- <http://www.depository.net/> and <http://www.denuo.com>

IANA contract up for renewal soon

- Gov'ts watching what will happen to IANA contract – contentious WSIS/IGF issue
 - JPA has morphed into Affirmation of Commitments now
 - Prediction: IANA one more contract with USG? 2??
-
- ❑ Not a really likely outcome...a trial balloon, but some have suggested a split of IANA naming and numbering functions
 - ❑ NRO would be the obvious body to inherit the numbering functions (IMHO)
 - ❑ Probably has implications for IANA contract...but I'm not smart enough to see them all

V4 to v6 biggest challenge and biggest opportunity!

- Low IPv6 adoption seen as “market failure” by some (mostly media)....
- IETF/RIRs shouldn't be seen as having “failed”, v6 available for ~decade, fees waived, low barriers to get v6, training, outreach, etc.
- Whose “job” is it anyway? Is it the RIRs only?
- Gov'ts can be helpful in encouraging deployment, Japan, Korea oft-cited success stories - African v6 TF can do similar

Some national governments @ITU wanted to do IPv6 address admin

- Very few ITU members driving this, seems to have fizzled due to capacity building by APNIC event/NRO @ITU event
- AfriNIC has done extensive educational work on this, capacity building from WSIS to IGFs to ITU v6WG to PP in Guadalajara to WTDC in Hyderabad (I hope Adiel is allowed to keep his FF Miles!)
- ARIN XXVI (and XXVII) recently was my first time seeing government agencies taking positions on IP policy (IRS, FBI, State of Idaho, DEA, RCMP, etc)
- So governments are being drawn in and actively participating in RIR communities



African v6 Task Force



- Huge opportunity to show world how to do Multi-Stakeholder Enhanced/Continuing Cooperation
- We have 3-5 years
- Led by AfriNICs v6 Evangelist
- AfNOG/RENS/ccTLDs/Carriers/Regulators, etc
- Plenty of work for all, must focus on ISP/Carrier deployments - not talk

But some are not giving up...at Oct ITU Plenipotentiary meeting..

- "Consideration should be given to the expediency of having the functions of GAC carried out by a specially-constituted group within ITU with the authority to veto decisions adopted by the ICANN Board of Directors. **If it is so decided, the ITU Secretary-General should be instructed to consult ICANN on the matter.**"
- Of course, that proposal wasn't part of the final outcome of the PP in Guadalajara...some ITU leaders not keen on this task apparently
- The final "agreements strengthen and underline ITU's commitment to work with the Internet community and extend the benefits of the Internet to all global citizens."
- http://www.itu.int/net/pressoffice/press_releases/2010/41.aspx

RPKI

- Routing has never been secured, notable incidents get publicity (Pakistan-YouTube/China in the news this month for hijacking 1/5 of Internet traffic)
- This gives the RIR bad press (folk assume we are in charge of routing)...Randy: “we need to fix this before we are crucified in the Wall Street Journal”
- Some: “This is extortion = RIRs control routing”
- So.....“damned if you do and damned if you don’t”
- Bottom line: all RIRs to be ready to start issuing certificates by no later than 01 January 2011
- VAS offered by the RIR (for free or fee)?

Conclusions

- We live in “interesting times”
- RIR system still functions incredibly well, widely respected, open, transparent, bottom-up
- RIR community processes need further engagement by all stakeholders
- AfGWG/LEWG a good project, but needs to be mainstreamed, not in a separate “silo”